

Coastal erosion of the Kokkini Paralia (Red beach) and Vlychada coast and shaping process their new topography (Santorini Island)

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The surface soft tuff-pumice materials (1 to 40 m deep) products of the known as Minoan enormous prehistoric volcanic eruption of the 17th c. BC shaped the Island of Thera/Santorini. Sea wave erosion has been calculated, along the external shoreline of the Island. Two types of coastal areas have been studied: Cliffs and Beaches with equilibrium erosion- deposition. The cliff coastal erosion creates the characteristic “natural sculptures” of Santorini, like the famous Red Beach (Kokkini Paralia) and the Vlychada coast.

Landslides and rock falls of the Red Beach and the sea wave erosion process shape dynamically the beach continually at least from the prehistoric eruption. In combination with the open red and dark colours they create the beauty of this unique natural monument.